

C-FOS INDUCTION BY NaCl INTAKE, BOMBESIN OR THE COMBINATION IN THE NTS AND AREA POSTREMA OF SODIUM DEPLETED RATS. Frankmann, S.P.¹, J. Henninger¹, M.J. Kruse¹, K. Westerman¹, and T.A. Houpt². ¹Dept. of Psychology, University of Southern Colorado, Pueblo, CO 81001 and ²E.W. Bourne Behavioral Research Lab., Dept. Psychiatry, Cornell University Medical College, White Plains, NY 10605.

The sodium depleted rat rapidly initiates intake of NaCl (salt) solutions when offered and satiates within 30-60 minutes. Exogenous administration of the peptide bombesin (BN) does not delay the onset of salt intake but does hasten the onset of satiety. Salt intake in the sodium depleted rat has been shown to induce c-Fos immunoreactivity (c-Fos) in the NTS, and BN has been shown to increase c-Fos in the NTS of the non-sodium depleted rat. In the current study we examined c-Fos positive cells in the NTS and area postrema (AP) of sodium depleted rats 90 min after: 1) access to 0.3M NaCl, 2) BN administration (8 µg/kg, ip) or 3) combined BN and 0.3M NaCl intake. Preliminary data suggest that either salt intake alone or BN alone induce c-Fos in the NTS but very little in the AP. The combination induces increased c-Fos in both the NTS and in the AP. These data suggest that not only is the behavior of salt intake altered by BN administration, but also the pattern of c-Fos induction in the NTS and AP is altered.

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